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ABSTRACT

To develop a meaningful intervention for waiting list families and their preschool emotionally disturbed children, a home training program for the parent and child was initiated. The focus of the program was on productive communication between parents and professionals. During a period of 2 years, 45 families completed the program. The program consisted of individual instruction with a parent, and parent and professional group meetings on a regular basis. The researchers felt the program of direct approach to parents offered an effective, realistic approach to the very young emotionally disturbed child to whom traditional therapies were often unavailable. It was concluded that the approach improved the mental health of the family by strengthening the parents' self concept and enabling them to use themselves more productively as family members. (CD)

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A HOME TRAINING PROGRAM

FOR

YOUNG MENTALLY ILL CHILDREN

by

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Severe shortages of pre-school and school facilities for the young mentally ill child and of guidance programs for his parents are a matter of regret and grave concern to parents and professionals alike. These facilities which do exist have long and long-standing waiting lists. As a result, during the child's early years, when the parents first become aware of the child's developmental abnormalities, and when guidance and direction for the parents as well as training for the child are most desperately needed, there are frequently no services and diagnostic tools available.

The League School was one of the first day schools to be established for severely disturbed children whose families wanted to keep them at home rather than place them in a residence or hospital. Presently, the school has an enrollment of 80 youngsters of elementary school age, who attend five days a week. These students are all residents of Brooklyn and Queens, and transportation to and from the school is provided by the New York City Board of Education. No child under five is eligible for this transportation.

The school, housed since September 1967 in a new building designed for it, is a non-profit, non-sectarian institution licensed by the New York State Board of Regents as a special therapeutic school as well as by the New York State Department of Mental Hygiene as a Mental Health Clinic. It is supported by:

1) New York City Board of Education, which pays the salaries of 11 of the teaching staff of 32 licensed certified teachers and provides materials, supplies and equipment.

2) New York City Community Mental Health Board which gives matching funds for certain of the school's clinical and educational services.

3) Contributions and funds raised by parents, the Board of Trustees and the community. At times, funds are contributed by private foundations.

The school uses education as its primary treatment approach. Each child's program is based on an individual psycho-educational assessment and is complicated and revised appropriately throughout his stay in the school. Classes are formed based on the children's level of functioning and social development. The maximum class group in these students is one teacher. Where appropriate for the level of the group, New York Board of Education curriculum guidelines are followed. Ancillary services directly available to children and consultation for teachers are speech and language therapy, dance and music therapy, medical, social work and psychiatric service.

It is the basic philosophy of League School that, when the child lives at home, the family can be a positive factor in his development and that parents and professionals acting cooperatively can maximize the benefits of the school program.

Summary of Program

Since its founding in 1910, the League School has been responsive to the unmet needs of mentally ill children in the community and has been the prototype

for the development of new services for these children. Consequently, a Home Training experimental program funded by National Institute for Mental Health (Grant MH-42240-01) was initiated in January 1988 to evaluate the effectiveness of a planned parent-professional effort on a limited part-time basis in improving the functioning of the children.

The Home Training program consisted of the following:

1) One hour weekly individual coaching of each child for the duration of the school year (30-40 sessions).

2) During this session, the parent sat in the room as a non-participant observer of the teacher-child interaction.

3) Every other week, small groups of parents met with the social worker and training director in parent discussion groups.

The questions to be answered were "Can part-time educational intervention for parent and child be therapeutic? Can it reduce family turmoil and improve parents' ability to manage, understand and work more children, with a resultant improvement in the level of social behavior of young mentally ill children on waiting lists?"

For the purposes of this report, these terms are defined as follows:

Young mentally ill children: Children between 3-7 years of age who have been diagnosed by a psychiatrist, mental health clinic, hospital or social agency as autistic, schizophrenic, psychotic, severely emotionally disturbed or mentally ill. No assumptions are made as to etiology.

Longer School Waiting List: These children have been diagnosed but are not currently involved in any program of educational or psychiatric services. They have applied for such services at Longer School and similar special services in the community. Their behavior makes them ineligible for services available to normal children of their age.

Education: Child – Each week the teacher and child have a one hour training session in the presence of the mother. Teaching is focused in the area of self-help, communication (speech and language), socialization, pre and early academic skills. These teaching sessions take place in small rooms designed for this program.

Education: Parent – Education is offered to the parent in four ways:

1) The parent sitting in the same room (but non-participating) observes each week the teacher's work with the child.

2) The teacher makes suggestions during the session to the parent for adaptation of her methods and materials for home use.

3) During or following each session, the director of the program (training director and supervisor) serves as interpreter and liaison between teacher and parent, enlarging and clarifying some of the ideas suggested by the teacher.

4) Every other week, the mothers (and/or fathers) of the children in the group meet with the social worker and the training director to discuss child training and management problems, family relationships and concerns of family and community living, specifically those involving the ill child. In a relaxed atmosphere, there is an interchange among parents and between parents and professionals. The model for these informal group discussions is therapeutic, informational, practical and skills-giving.

Samples

All 3-7 year-old children on League School waiting list were randomly assigned by a research statistician, following evaluation screening, to a control or an experimental group. No pre-requisites were demanded of the child or the family except acceptability for League School waiting list. Children found by the pediatric neurologist to have gross neurological impairment (i.e. uncontrolled epilepsy, severe deafness, blindness, orthopedic handicap such as cerebral palsy or mental retardation - i.e. Down's syndrome) were excluded from the study. Children were assigned to experimental or control groups by age (3-5, 5-7) and speech (with or without speech equally in either group). These assignments were made by a statistician who did not work in this facility or know any of the families. Random assignment was made following screening of all the children by:

1) *pediatric neurologist*
2) *psychologist, who provided an evaluation and an IQ score*
3) *speech therapist, who completed a detailed speech evaluation form*

Assignment to Groups

A total of 63 children were evaluated in the first year of the program. In the school year September 1966 - June 1967, 20 entered the experimental group, 20 the control group. In the school year September 1967 - June 1968, nine children were randomized into a new experimental group and nine children into a new control group. In addition, 13 children from the former control group, who still had no program at the end of the first year, entered the new experimental group, making a total of 33. During the course of the Home Training program, there was a high drop-out rate. Drop-outs from the experimental group mainly between occurred between the time of the child's screening and the initiation of the actual program. This happened when children were offered a full-time program in League School or other special facilities, when families moved, or when children were hospitalized. It should be stated here that it was our policy to take a child from the Home Training program into the League School when an appropriate place became available, rather than retain him in the Home Training program. In the first year, there were 13 drop-outs from the experimental group, 12 from the control. In the second year, there were 13 drop-outs from the experimental and seven from the control. Therefore, in the two years, 40 families completed the Home Training program and 30 families acted as controls. It is to be remembered that in the second year, 13 children from the original control group acted as their own controls in a cross-over design.

Instruments

Pre- and post-evaluations of each child in control and experimental group were obtained on the following measures:

1) *Vineland Social Maturity Scale - completed by the social worker at in-*

[illegible]

Philosophy:

[illegible]

of the Home Training program. Parents and children entering the building were physically greeted by name by the classroom personnel. Office and building personnel habitually smiled and greeted each family when they saw, often with comments about interesting children, new toys, etc.

This inviting atmosphere itself to the parent body of the regular day school often were eager to include Home Training parents in the regular Parent Association meetings and activities. Home Training parents were invited to join the Association, were notified of all events, included in committees and special efforts were made to help them feel comfortable when they attended.

f) Parents were encouraged to telephone when they were baffled or concerned about specific incidents at home. The training director and staff also telephoned parents when they felt that such a call would be specifically helpful, or arranged appropriate parental conferences at the time of the child's session.

7) Although each child was assigned to a specific teacher, all parents and teachers knew each other more than casually. Each teacher was interested in all of the families and indicated such interest by joining parents for coffee whether or not they were the parents with whom they worked. Conversation during coffee was at least a two-way communication between staff and parents in which there was a sharing of personal experiences involving the total families of both. In other words, parents were not expected to pour out problems, anxiety and fear to an interested but detached listener. All staff members felt comfortable about expressing some of their own family concerns when appropriate and therefore to some degree, identified in a positive way as parents with the parents in our program. This simple, natural approach gave substance to our frequent verbal expressions of our wish to work together with parents on a basis of equality.

8) At the inception of the program, three promises were made to each family.

a. No child would be dropped from the program because of his behavior -- no matter how difficult and disruptive it might be. When such behavior occurred, parents were immediately reassured by teacher and training director that it was precisely this kind of behavior which gave us the opportunity to develop effective ways of dealing with it.

b. We would at all times give honest opinions and evaluations. This honesty would include a frank admission of "I don't know" when we didn't know.

c. We promised to make unremitting cooperative maximum effort in working with the child and his family.

Any concerns expressed by the parents were accepted as important and real and were dealt with as such.

9) This was a parent-education program. The basic conviction held by the staff and constantly communicated to the parents was that parents could and would become more effective in teaching and managing their children. The role was conceived as a teaching process by which support the parents became better equipped and more confident of their own ability to help their children.

For parents to be effective, it was necessary for them to understand that in many cases their children would not themselves wish to function at a higher developmental level. These children seemed comfortable at the level with which

they were familiar and assured to be unable to learn the familiar voluntarily. It was considered on the parents to intervene and teach the child the necessary behavior appropriate to the west level.

Programs

A. 1. Since each family of those children assigned to the Experimental Group had been seen by the social worker at the intake interview, it was possible for the social worker and training director to plan teacher assignments. Factors taken into consideration in choosing the most appropriate teacher for a family were:

a - Clinical judgment of the personality of the mother

b - The life style of the family and its compatibility with the personality and life-style of the teacher and

c - The child's strengths and weaknesses

For example: If the mother seemed young, dependent and immature, but responsive to an authoritative mother-figure, she was assigned to the teacher who in appearance was motherly, warm and capable. Such assignments were flexible and a change of teacher was readily made early in the program when such change was indicated.

2. Hourly assignments of children and family to program were made considering as much as possible other family commitments and obligations: i.e. other children arriving home from school for lunch, regular medical appointments, etc.

3. Assignment to parent group was the least flexible part of the program, since these groups were scheduled on a specific day. Within the limitation, however, an effort was made to assign to an A.M. or P.M. group, balancing this with considerations of group harmony.

B. Each family was responsible for bringing the child to the program weekly and on time. No transportation or baby-sitting for other children in the family was provided by the school. Siblings were not admitted except in instances in which it was planned and requested and considered to be a possible learning situation for mother and siblings, or for the staff.

C. When the family arrived at the facility, they came directly to the Home Training room, where they were greeted by the child's teacher and training director. The parent and child usually went into the same small workroom each week. Occasionally, when there was a specific concern on the part of the parent, teacher or training director which needed discussion, the parent would spend more than the usual casual few minutes with coffee in the office with the training director. Most frequently, almost the entire hour was spent in parental observation in the room. It became the practice for the child to end each session with a visit to the office, where he could select a cooky or candy to end the session on a pleasant note, as well as have a rudimentary social learning experience with other children, parents and teachers who were completing sessions at the same time. Children were taught, in the course of this, the proper behavior for securing their cooky and were not allowed to grab or take handfuls or race in and out of the office. Some colorful and attractive toys were deliberately stored on open shelves in the office and teaching was also directed to impulse control in this area.

D. Training director visited each teacher-child session each week for at least

5.10 minutes – sometimes as an observer, sometimes working with the child to give the teacher an opportunity to observe objectively the child's behavior. The purpose of this was to help the teacher by suggesting additional work approaches to a non-critical orientation as well as enabling her to evaluate those approaches which seemed useful and those which were not.

8. Small parent groups met in the Home Training office for 1½ hours every other week with the social worker and training director – coffee and cake were always served. In the first sessions, parents were introduced to each other, after being greeted by name by the social worker and training director on arrival. Parents were addressed by name during discussion and their children were named and ages given so that the group could become acquainted with each family constellation.

9. Each teacher had an hour's scheduled conference with the training director each working day. This allowed 20 minutes conference time for each child. During this time, evaluations were made of past performance and future plans, considering both teaching areas and family involvements. The training director's direct experience with the child was used in these conferences to explore further possibilities for developing his program. The conferences were always a mutual exchange of communication and ideas about the child. The teacher was not "told" what to do but planning was done on a consultative basis always considering the total family.

10. Each child and family remained in the program for 35-40 sessions – the equivalent of a school year. Attendance of staff, children and families was surprisingly regular. On the average, fewer than five teaching sessions were missed by any child. Make-up sessions were arranged wherever possible when regular sessions had been missed. Attendance at parent group meetings was excellent.

11. Detailed anecdotal records were kept of each teaching session and each important exchange between social worker, training director, teacher and parent was recorded. These records were added to psychological and social work interview material obtained in the screening period and were entered to an ongoing basis throughout the year.

12. It was considered an important part of the program to help families have forward future planning for their child and contact was not necessarily terminated with those families when the child's program ended.

Staff

The Home Training program was originally designed as an after-school part-time program, to be staffed by League School teachers working for two hours after their regular classes left for the day. It was hoped that these highly trained people could effectively use their skills to help our waiting list families by individual work with a child and demonstration of effective ways of teaching him to his parents. Within a very short time, three or four weeks after the beginning of the program, it was realized that this was an impractical arrangement. League School teachers were physically and emotionally exhausted after a full day with very disturbed children. Parents found it difficult to arrange for the care of other pre-school siblings at that hour. Siblings who were in school were home. Children

were hired. Parents were hired. Scheduling time coincided with the morning rush hour. For these reasons, it was decided that we would revise our plan and carry on the program during regular school hours. In order to do this, it was necessary to hire a separate staff. After making many inquiries through professional channels, to no avail, an advertisement was placed in the New York Times. About 60 people responded, and about 10 were interviewed. Two women were hired, and they are still teachers in our program. In addition to the training director and these two, there were two other teachers. One had been a League School teacher aide who was going back to school for further training and could no longer work full-time. She was a mature woman who had not completed college but had proved herself to be an exceptionally talented, skilled, warm and resourceful teacher. The other was a supervisor of student teachers of emotionally disturbed children at a large metropolitan university. She had an M.S. in special education and had had extensive experience teaching other emotionally disturbed children who functioned within normal range academically. One of the two teachers who were engaged through the New York Times had an M.A. in clinical psychology and had worked with atypical children. The other had a B.A. in speech therapy and had also worked with atypical children. Thus, the first-year Home Training staff consisted of the training director who had an M.A. in Educational Psychology and experience in working with atypical children and their parents individually and in groups, four teachers and a social worker, all part-time.

The focus of the Home Training program is on productive cooperation between parents and professionals. Since it is important that the child's teacher be able to be helpful to the parent as well as the child, teachers were sought who could not only teach the child but who would also be able to relate to the parents and to understand their problems in dealing with the child, rather than concentrate exclusively on teaching the child. In order to do this effectively, the teacher had to be able to formulate goals for her demonstration and interpretation to the parent, as well as goals directly related to her work with the child. Part of the training director's job was to aid in the determination of these goals, to help the teacher keep them in the forefront of her consciousness, and to offer suggestions for accomplishing them. We realized early in the first year of the program that it was a relatively simple matter to develop and work on goals for the children. It was far more difficult to think through and clarify realistic goals for the parents. It was most difficult of all for the teachers to remember that the parents must be an integral part of their thought and work. Their past training and experience had offered very little opportunity for direct contact with parents, and the little contact which had been present was infrequent and formal. In school settings in which they had worked, the parent-teacher relationship was a restricted one, and most communication with the parents had taken place via a supervisor or psychologist.

The teachers had been thoroughly apprised of the nature of the program when they were interviewed, and again before the beginning of the program. They were in sympathy with the parents' situation, and did not assume that the child's problems were the result of parental rejection or mishandling. However, it was one thing to understand and another to try to teach a child in the presence of his

parent and remain unobtrusive and unthreatened, while at the same time keeping in mind the necessity of helping the parent both make sense of what was being done at the moment and be able to adapt it for use in everyday family living. There is a basic difference in the role of the teacher in this program and in a regular special class situation. If the parent did not understand or could not accept the objectives and methods of the teacher, or if she was unwilling or unable to make use of similar approaches in her handling of the child, then the teacher would be failing to accomplish a large part of her objectives.

This parent orientation was paramount and was emphasized by the training director in each conference with each teacher. Initially, it seemed to be understood, approved of and accepted, by the teachers. However, one teacher was not able to orient herself comfortably to this point of view. After a few weeks, she expressed resentment at having to "please" the parents, and dissatisfaction at the small gains of the children. Because she was a trained and dedicated professional, she was able to analyze the sources of her discomfort, and to realize that this particular job did not offer her sufficient gratification. She left, on an amicable basis, at the end of four months.

She was, incidentally, the only one of the Home Training staff who did not have children of her own. Whether this was related to her reaction cannot be determined, but it is an interesting question. It is possible that a teacher who is also a parent is more able to understand and communicate as a professional to parents, and that in a program such as this, it is a decided asset. This teacher was replaced by another trained teacher who found it difficult to reorient her thinking to parent-education rather than child-education. As a result, she remained only briefly with the program. Her children were reassigned to the other teachers.

Some general observations can be made about our Home Training staff. First, it seems that there is a large untapped pool of professional talent of highly trained women who can work only part-time because of family obligations, but who would only be interested in a job which offers them a challenge and an opportunity to use their skills. According to our teachers, one of the outstanding appeals of this job is that they are not doing half of a job which they share, but that the two days which they spend working are "all" of the job. Because of this, women were eager to work in this situation which provided intellectual stimulation, emotional gratification and financial rewards commensurate with ability, experience and training. The non-routine nature of the work and the professional contacts provided continuing interest and growth for every professional involved.

Much thought has been given to appropriate hiring policy for a program of this kind. Our experience has suggested that standard teacher training is not the best background for this kind of work, although we are aware that we have dealt in very small numbers and our tentative conclusions might not be upheld in the future. We have examined the personalities of teachers who have been successful in our program and have tried to extricate some of the attributes which have contributed to their effectiveness. We are interested in this for our own future use and also so that we may suggest reference points for hiring policies of other agencies which are setting up similar programs. Following is a list of qualities which we believe to be significant:

- A clear recognition of her reasons for being involved in this kind of a job, based on a personal philosophy which considers each human being valuable and worthy of effort.
- Recognition and acceptance of her own feelings, including those of anger and hostility, directed at times to the child, the mother, or both. An ability to be honest in accepting one's own feelings of frustration, despair and inadequacy.
- A belief that the child is ill and that his illness is not the result of previous parental handling.
- Ability to feel comfortable and unthreatened by unusual, often bizarre behavior.
- Ability to work closely with other professionals, which includes enough internal security to acknowledge "I don't know" to parents and professionals.
- Ability to communicate with parents, which includes reception and responsive communication, listening and learning from what parents say - giving them credit for both sense and sensibility.
- Ability to maintain a certain quality of detachment while still being interested and involved, to be objective enough to be a participant - observer.
- Flexibility
- Sense of humor
- Awareness emotional and physical stamina

In terms of the teacher's direct relationship with the child, we seek teachers who can accept small realistic goals for the child's performance; pleasure and responsive on the youngsters' part; comfort with physical contact - even with children who are "too old" for lap-sitting; willingness to back track when necessary and acknowledge that a given method is not working.

For the purposes of clarity of discussion, the teaching procedures and techniques will be described in the areas in which we focused, namely:

1. Self-help
2. Communication (speech and language)
3. Socialization
4. Pre and early academic skills

It must be emphasized that these are not discrete areas and that overlapping in teaching and learning always existed from one area to another.

The first session was unique in that the teacher and child worked alone for an assessment of the level of functioning in the aforementioned areas. The teacher's observations in this session were combined with information and comments of other clinicians who had evaluated the youngster or had had contact with the family. The mother's first session was with the training director at the same time that the child was being seen alone by the teacher. In this interview, the program was re-explained and parents were encouraged to express their most vital concerns about their child. At this time, we elicited the areas in which the family most wanted help and guidance from us and indicated that we would focus on these areas. Families were cautioned to plan to undertake one teaching area at a time.

1. Self-Help

It is our observation that a diagnosis of psychosis, schizophrenia or autism tended to immobilize parents to the degree that they had been unable to make even minimal, basic demands of the child because of their fear of further damaging him. Consequently, many of our children came to us in diapers, drinking from a bottle, being fed baby foods, often on a bizarre diet, eating to placate temper tantrums, disrupting family meals by never sitting at the table. Bedtimes were almost universally reported to be hellish, with frequent reports of the child's inability to go to bed before everyone in the house went to bed and of his inability to stay in bed throughout the night. These children were not expected to conform in any way, even to expectations appropriate for their level of functioning and there was a pervasive air of weariness, hopelessness and defeat on the part of the parents, as they foresaw a life with their child operating on his present level. These were usually the areas of primary concern to parents and we considered it our responsibility to demonstrate to the parents that changes were possible and that parents could be the instruments of these changes. Fundamental to the parents' success in implementing healthy change was the frequently reiterated staff conviction.

Our judgments of the child's readiness for training in self-help skills were based on parents' reports of behavior at home, information from other professional sources and minute observations of the child's behavior in the teaching sessions.

A – Eating

Many of our children came to us drinking milk from a bottle (which they

often prepared for themselves) but other liquids from a glass or cup. The bottle was used as a pacifier and as an assured source of contentment, especially in the frequent cases in which children were finicky eaters. It was difficult for parents to believe that the child could relinquish the bottle without creating constant turmoil in the household or remaining on a dangerously low nutritional level. We advised parents to evaluate their own readiness for undertaking this teaching step and that only their determination would make it possible to accomplish this step. We gave them support in moving toward this step by:

1) assuring them it could be done
2) reassuring them that the child would not long go hungry
3) telling them that our observations and other parents' experiences with this technique the upheaval would be relatively short.

When the decision to wean the child had been made by the parents, we recommended:

1) All the bottles in the home should be thrown away while the child watched
2) No deviation from this program could be permitted (i.e.: "just a bottleful bottle")
3) Small amounts of milk should be offered at appropriate times in a small glass. For the purposes of accomplishing this training, all other liquids (especially soda, fruit drink, etc.) were to be eliminated with the exception of water.
4) It was suggested that other members of the family drink milk at the same the child was offered milk.
5) The child, having demonstrated his ability to drink from a glass, could be brought to eliminate the bottle and with strong staff reinforcement, the parents were urged not to back down.

We had no failures in wearing in this program.

3 - Food

Many of our children were on strained food because ... ish parents were concerned they were unable to chew. In all cases, it was ascertained in discussion with the parents that the child did, in fact, chew certain foods. This fact and its implications often astonished parents when it was brought to light. For example, one six year old boy refused all table food but did eat a grilled cheese sandwich cut into bite-sized pieces on Fridays, due to the family's religious convictions. In other words, in this instance in which the mother felt strongly about diet, he was able to respond appropriately. When she obtained this insight, she was able to carry through by offering him a normal diet and eliminating the baby food. She was supported and heartened for future effort in other areas by the ease with which this was done.

In another case, a child, who subsisted primarily on raw potatoes and onions and suffered from excruciating gastro-intestinal distress on occasions that he required hospitalization, was taught to expand his diet and eat normal foods by the simple expedient of refusing him the known diet. He refused a few meals but his mother's consistency and conviction enabled her to hold out until hunger took over.

Many children ate small amounts all day long, were having a regular mealtime

or eating the bulk of their food at specific times. Often they demanded and were given food by verbal or gestural commands or simply helped themselves from the refrigerator or pantry. The staples of their diet tended to be snack foods and they were described as being unwilling to eat a normal diet, at normal times. The conviction that this behavior was unchangeable was so entrenched in the family that no effort had been made to alter it.

We stated, when the parents were ready, that this behavior could be changed by their decision to change it. Specific suggestions to implement this decision were:

1) a gate on the kitchen to latch on the kitchen door
2) taping the refrigerator closed
3) refusal to offer between-meal food (including milk which really filled them and made other food uninteresting)
4) If he did obtain the desired snack, it was to be removed mostly before he had an opportunity to eat and enjoy it
5) At meal times, he was to be offered food he liked in *full-sized portions* at his place at the table
6) This food was to be removed without comment if he indicated disinterest in eating it
7) No food or drink (save water) was offered until the next meal.

This was very difficult for parents to decide to do and to carry through. There was great anxiety during this training which required massive and continuing reinforcement to persist and by telephone to be accomplished. Fortunately, this change rarely took more than two or three missed meals to be successful. Victory in this area was tangible and quick and encouraged parents to undertake more difficult tasks.

C. - Self-feeding

Many of our children indicated their capability of feeding themselves by using implements for certain foods, but were spoon-fed by the parents for other foods, especially those which they didn't particularly enjoy.

We pointed out that if they could eat one food with a fork and spoon, they could do so with all food and that they would not go hungry. Concrete suggestions which were made were:

1) A fork is frequently easier to use than a spoon
2) The food he liked should be offered first in small portions so that his immediate hunger would not be satisfied by preferred foods.
3) If he threw food or played with it, it should be removed without comment and not re-offered.

Closely related to the problem of self-feeding was his ability to remain at the table in his chair throughout his meal. Parents' anxiety about sufficient food consumption had frequently led them to allow him to flit to and from the table at will, to share a mouthful of food into him as he ran by or to see TV as an opiate while he was fed or fed himself. This behavior was often a source of family strife since other children in the family were not permitted to act this way.

Once reassured by the staff demonstration with the child that he had the ability to sit in a chair at a table for the time required for a meal, parents were

quickly able to implement this as real-time behavior. This was another area in which parents had total success.

D - Toileting

Many of the children came to the program in diapers and rubber pants completely untoilet-trained. Others were "trained" in that they had selected a spot in the house in which they urinated or defecated. This was true to the degree that parents often supported this behavior by helping to remove pants, providing receptacles for urine all over the house and by tacitly accepting this behavior in various ways. They frequently suggested the flues or changed the diapers with little expectation of changing the behavior. They didn't believe that the child could in fact use the toilet appropriately although in many families they had trained their other children. While this was often a major area of dissatisfaction, they were extremely reluctant to try to change it since they anticipated failure and had already experienced abortive attempts to institute training.

We were again specific and concrete in suggestion and example in this area:

1) Diapers were to be immediately and totally abandoned since they are, in both the child and parents' mind, used as a tangible evidence of their expectation that the child will wet and soil them. Parents resisted this and often supported by using training pants under rubber pants or training pants only at home. We pointed out to them that this, in effect, was an indication to the child that he was expected to wet or soil his pants. This was the hardest step for parents to make for practical and social reasons.

2) We put the child on the toilet with the parent present. We demonstrated that while it was necessary sometimes to hold him physically, but non-punitively on the toilet, the child quickly learned to sit there without being held or without crying. We recognized and told the parent it was easier for us than for them to do this but the demonstration served to assure the parents that it was possible for the child to use the toilet. This helped them work on training at home.

3) We recommended removing wet or soiled pants immediately with obvious parental displeasure by word, expression and gesture (or physical punishment) and putting him on the toilet. The soiled pants should be taken into the toilet with him so that the connection could be established between the bowel movement and the toilet.

4) Parents were encouraged to select a word for urination and defecation and to use the word consistently even with non-verbal children.

5) They were told to establish a schedule for toileting in order to help the child regulate himself physiologically. They were encouraged to report success. Guidelines for a realistic expectation of a toileting schedule were given.

6) The child was to be taken by the parent or sibling of the same sex to observe toilet functions and the selected word was repeatedly used at this time.

7) When a habit pattern for the child seemed to have been established, we recommended that the responsibility for toileting be shifted to the child. For this to succeed, it was necessary that he could

a - handle his own clothing or
b - indicate by word or gesture his need to the adult
c - the bathroom be available to him.

We discouraged the use of potty chairs as any child's toilet was to have full flow; would be able to use available plumbing in any situation. We showed him how to hold the side of the toilet and to manoeuvre and aid in balance. We suggested a sequence on which he could put his feet while he sat on the toilet at home. We suggested that during the training period, an effort be made to keep the child wet-free as he could use his own toilet when possible.

C - Dressing and Undressing

Often, at initial interview, parents told us the youngster could dress and undress himself but didn't because it was more efficient for the parent to do it. We understood and sympathized with this fact but took the position that it was the parents' job to help him grow up and that dressing skills were reasonable behavioral expectations.

1) We suggested working on one article of clothing at a time.

2) We demonstrated, when necessary, by physically moving the child through the appropriate motions until he was able to do it himself.

3) To do this, it was necessary to clarify the steps involved by breaking the procedure into workable units. We found that many parents expected the child to handle an article of clothing without demonstrating what was necessary on his part. Teachers went through these procedures with the child more than once in the teaching session. (For example: Parents frequently said to a child, "Zip your zipper," without being aware of the learning steps involved.)

4) We reminded them that this procedure was intimate and required a rearrangement of their schedules in order that they have the time to supervise each step of the process in an unpressured way. We pointed out that each piece had to be learned separately and specifically. We noted that the child might become confused with the introduction of a new step in the process and that perfection could not be immediately expected.

5) We urged parents to involve the child in the dressing and undressing procedure even before he was capable of beginning to do it himself. We stressed his participation as a person, and not a robot, in this process. We demonstrated this by getting his attention, having him look at the part of the body involved using simple appropriate words and maintaining immediate contact to increase his awareness of his relationship to the clothing.

D - Hygiene

In most cases, our children were not expected to take any responsibility in this area -- wiping themselves after the toilet, washing hands and face, bathing, brushing teeth, combing hair. As in the area of dressing, they were "done to." We encouraged parents to involve the children directly in these activities focusing on the task, dividing it into individual components and encouraging the child's own attempts even though the results were less than perfect. For example: If he is learning to wash his hands, he is taught to turn on the tap, hold the soap, rub up a lather, wash palms and back, rinse soap, clean, turn off water, then get the towel, dry, return the towel -- all in separate steps. The teaching demonstrated this with the child. He is to be praised at each effort.

We found that often, in this and other cases, the parent assumed the child understood the task and wouldn't comply due to stubbornness, willfulness or laziness. It was a frequent revelation when she saw that he was confused and literally unable to go through the steps necessary for completion.

B. Communication

All of our children had severe limitations in the areas of expressive and receptive language. Many were mute. Of those some clearly indicated understanding of receptive language while others gave no such indication. Of those who spoke, many were echolalic, others' only verbalizations were TV commercials were used a word-salad, jargoning or ecolalic speech - useless for communication - and others had expressive speech roughly commensurate with their functioning level. Those who spoke had the gamut of understanding of receptive language. Degree of verbalization had little correlation with the understanding of receptive language. Initially, we were often misled by the sophistication of verbal output to overlook the paucity of verbal understanding.

Some of the children who used words were able to "read." There were those who could overkill with no comprehension, through to those who could mechanically "read" the New York Times. With some of these, their comprehension was compatible with the difficulty of the material. For some, there was no comprehension. Others ranged between little and no comprehension.

We made an initial approach to this by ascertaining the level of verbal comprehension without the use of gestures. Often parents who felt the child understood but ignored directions were astonished to learn the severity of the child's disability. This was demonstrated by deliberately using the same directions the parents felt the child understood, carefully eliminating gestural or contextual clues. This clarified for staff and parents the child's degree of verbal understanding. This was a powerful tool in helping parents understand that their expectations of behavioral response to verbal direction were unrealistic.

This insight work provided the acceptance by parents of the necessity to work communication skills starting at the level at which the child was presently functioning rather than an age-appropriate level.

With these children, we found it ineffective to demand speech even when they had previously produced it (i.e. say "cookie" before you get cookie). Instead we taught parents the following specific techniques designed to help the child improve his ability to understand receptive language and also to produce speech:

1) Use of single words and brief sentences in all situations with the child. This was explained to parents on the basis of speech development as it normally occurs in infants and young children: mainly important nouns, relevant verbs and a minimum of descriptive or conjunctive words.

2) Those significant words were repeated clearly and distinctly at times when the object or action was in focus. For example, in dressing, the article of clothing such as shoe was named by the child as named for him, felt and looked at by the child continuously while it was being handled.

Since all of our children had difficulty staying in a chair, they were told to, so in some cases put him, a chair while the teacher reinforced the action by the use of the single word command "sit." Gradually the physical reinforcement

get immediate parental reaction. We helped parents also to be more subtle communications from the child before extreme behavior was reached by him. For example: when the family was ready to leave a session and the child was dressed in his outer clothing and waiting, it often happened that the parent talked for a "few minutes talk" with the training director or teacher. The child indicated his restlessness by whining, going to the door, tugging at the parent. We could then point out these behaviors showing the end of his reasonable tolerance and obtain response before he threw himself screaming and flailing on the floor.

In other words, all the techniques in this program were used in an effort to enable the parent to focus on the child as person and not just on the child's problems. With this focusing, the parents developed an awareness of what they communicated to the child and learned to analyze how certain of their behaviors elicited respondent behaviors from the child.

Parents were frequently astonished at their success with the child in areas in which they had formerly failed. It was possible to point out to them that their own assumption of success was a major factor in achieving it. Their ability to assess success was often a result of seeing the teacher succeed in a similar area and was underscored by our repeated statement that the teacher had no magic but when a task was selected based on careful analysis of the child's ability and level of performance, she knew it could and would be done. This also assumes communicated itself to the child and was a positive force in the teacher's success.

Parents would report that a sporadic and tentative approach to the child failed our work. A re-discussion and clarification of the role of parental ambivalence with the training director, teacher or in group frequently led to determination and assumption and realization of success in the same area the next week. Success in one area gave parents confidence and led to success in others.

III. Socialization

Although we knew that all aspects of living with a mentally ill child are fraught with emotion and difficulty for their families, the child's inability to function with other people or his functioning with known public behavior was an area most painful to all members of the family -- siblings and relatives as well as parents. The child's strange behavior often impelled parents to explain its reasons to critical strangers in public places as well as family members. Family gatherings were traumatic, often totally avoided, and many of our families isolated themselves from family, friends and neighbors. Relations of siblings with their peers were impaired and the rights of all family members were sacrificed. Universal guilt on the part of parents was expressed and overt or veiled hostility to the ill child was a natural concomitant of his disruptive behavior. These children were seldom left with babysitters, and frequently parents had assigned themselves to a twenty-four hour a day, seven day a week guardianship of this child.

We discussed this problem at length in the group and in the individual sessions. The following points were clearly established:

The world would not change to meet the child's desires. He had to learn to conform to the world to the extent of his ability. He could learn to tolerate the inevitable noise of the subway. He could not and should not be permitted to remove all the cans in a supermarket display. He need not be allowed to help him-

will be ready at the proper ready state. He could be required to hold his parent's hand while walking down the street. We emphasized and put on our bulletin board the slogan "Parents are in charge." We pointed out that this was the age when he was small enough to control physically and when it was appropriate for them to insist on physical means, if necessary, on at least minimally acceptable behavior in public places. It was suggested that this be taught by:

– Physical restraint – holding him in a supermarket

– Removal from the scene if behavior could not be controlled

– Refusal to buy peace at any price by giving into the child's demand for the sake of short-term quiet.

It was emphasized that parents would only be effective in teaching new public behavior if they themselves were convinced of the possibility of its being learned by the child. They had to decide that they would follow through in teaching it and would be able to tolerate, without back-tracking, unpleasant and embarrassing moments while it was being learned.

As the parents became more confident of their ability to deal with the child and understood more of his confusion, the need to explain or apologize to the casual passerby was considerably reduced and, in many cases, eliminated. Parents began to recognize themselves as experts in the area of the mentally ill child and to trust to their own know-how in managing their child. They began to realize that their explanations had been based on their own uncertainties. Additionally, we helped them understand that the reaction of a stranger was often due more to fear of strange unexpected behavior than to condemnation.

Sibling relationships were almost universally described in initial interviews as harmonious, sympathetic, understanding and helpful. There was almost complete denial of any problem when specifically questioned about this. Our approach was one of assuming that living with this sick child had to produce massive problems in the area of family relationships. We knew that at times, siblings were bound to be resentful and hostile. We verbalized for the parents that we expected and accepted that they were also at times resentful and hostile about their child and the demands of living with him. Since we said that hostility and other negative emotional responses were completely natural and universal for all parents with all children and most especially with children like these, it began to be more possible for our parents to accept these feelings in themselves and to expect them in their other children. Consequently, we examined often the daily interactions of the sick child with the normal ones and helped parents work out realistic ways of dealing with them by building in guarantees of the well children's rights. We said that we did not believe in human sacrifice and that well children should not be penalized for being well.

While we accepted the parents' responsibility for the care of their child, we openly decried their use of themselves as whipping boys or doormats. We suggested specific sources for baby sitting services (local college students, nursing schools, etc.), urged their use and heartily approved the use of these services. We encouraged parents to spend time with each other away from all of their children – indicating that this improved their capacity to be good parents and helped the child learn to adjust to someone else.

In developing abilities in coordination in the child we:

1) taught the child to make eye contact by holding his face gently but firmly close to the teacher's as she looked at him, blinked her eyes, stuck her tongue out, whistled, blew gently into his face and worked at teaching him to focus on her face. This was supplemented by intensive work in the mirror with the child focusing on his own face, pointing to his features as they were named, pointing to the teacher's features, going eventually to a doll's face and then to pictures and actually drawing faces.

2) When a teacher and child worked on a simple task such as stacking rings, emphasis was, for this purpose, on the mutuality of the activity with the child learning to take his turn and wait while the teacher took hers. He must accept an article from the teacher's hand, hand it to the teacher, wait for and follow either verbal or gestural directions. He had to use the equipment or participate in the activity as it was set up by the teacher and not as he may have preferred to initiate and carry it out. This was true even with familiar games such as rolling the ball.

3) The child was taught to use one toy at a time although many colorful toys were visible and available in the room. He returned the toy on completion of the assigned activity with it before obtaining another toy specified by the teacher. When he threw pieces of a toy on the floor or across the room, he was required, physically moved if necessary, to pick up the pieces and return them to the table. Although this initially was the main teaching task in some cases, it was learned by all children and parents reported successful transfer of this learning to toys at home.

IV. Pre-Academic and Academic:

Since the children were in the chronological age range in which normal children could participate in and benefit from a school group experience (nursery school, kindergarten or early elementary grades) and since most of their parents had expectations for the child's performance chronologically appropriate but inappropriate for the child's specific developmental level, our first emphasis was to help parents understand the particular stage of development of their child. For example, one mother who enjoyed working with and was skillful at craft activities expected her very defective child, age 6, to understand the purpose of an activity, such as papier-mache modelling, and be goal directed in that he could work toward making a specific object, be sufficiently impulse controlled not to destroy the object in the making and to be able to wait during the process. In reality, this child could not sit for as long as a minute, could not visually attend to a task, could not use his hands effectively even for gross activities, had no expressive or receptive language, had no idea of the purpose of the task, could not follow verbal or gestural direction, could not tolerate wet hands and was generally functioning at a 12 month level in most areas.

Following a few sessions, in which this very bright mother observed the teacher working or teaching him to sit down, stay in contact and attend to a task appropriate for a 6-8 month old child (putting pellets in a plastic bottle), she was able to analyze the discrepancy between her expectations and his abilities.

further, she was able to use the need for starting at his level, breaking down tasks into workable elements, to be sure that the child had over learned one step before beginning the next step: instead of expecting papier-mache figures, she expected seeing him begin to look at the material, finger it and look at his fingers.

From the foregoing example, we showed that the role of the teacher in the home demonstration of her work with the child in the parents' presence was to begin with analysis and clarification of the child's developmental level. Several sources were used for this evaluation, beginning with the applicable material from agencies which had evaluated the child, the social worker intake and Vineland, the psychological assessment including an IQ score and a lengthy protocol, the speech therapist's report and the neurological screening. The first session between teacher and child was the only one in which the parent was not present. This hour was structured in that it always included an opportunity for free play, a situation requiring social interaction on a reciprocal basis between teacher and child, a mildly frustrating experience and a more severely frustrating experience. An effort was made to end this session (and all subsequent ones) on a pleasant note.

The evaluated material from other disciplines mentioned above was not made available to the teacher until the end of his first session. The only information she was given was the age, sex and name of the child. This was done deliberately so maximum value might be derived from one highly trained and sensitive teacher's evaluation uncontaminated by other professional opinions.

During the hour in which the child was alone with the teacher, the parent and training director discussed the mother's evaluation of her child's abilities and the area in which she felt the most urgent need for help. The importance of the initial respect for the parent's opinion and priorities cannot be over-emphasized here since we feel it was one of the key factors in establishing the relationship and tone of mutuality of the program. We recognized that the problem the the parent presented as being the most distressing was one close to her and could be evaluated at that moment and that there were, without exception, deeper and more complex areas of difficulty. We accepted as significant and important that area which the parent expressed as significant and important to her and made every effort to give priority to work with the child in that area and to discuss ways in which the parent could also do this. For example, the child eating on the walls was offered as a major problem in this first session. Therefore, the focus of the teacher's early sessions involved paper, crayons, pencils and pens. The child, fascinated with crayons, had no idea of their appropriate use. The observing mother saw the teacher

1) set up the tasks by putting the materials on the table
2) require that the child be seated before he could touch the crayons
3) physically restrict the use of the crayons only to the paper
4) remove the materials from the table and the child if he left the chair, drew on the table, ate the crayons
5) calmly failed to respond to the child's tantrums resulting from this restriction
6) if the child could not accept these limitations in the use of these materials, they were removed for the remainder of the session and another entire

of tasks was presented.

7) the parent was urged to allow the child to have response only at a designated place, only when she could offer constant physical supervision and only if she was prepared to remove them and accept his resultant objections with calm assurance.

8) the same material was presented in the same way with the same limitations at each subsequent session until the child understood the behavior demanded of him, accepted the limits and used the materials appropriately.

After the teacher's first session with the child and the training director's interview with the parent, the teacher and training director conferenced, assembled all data available on the child, discussed and planned short and long term goals for the child which could be demonstrated and charted for the parent so that the teaching could be implemented at home. A wide range of appropriate activities and materials were selected for each child.

Emphasis was on highly individualized programming for each child in the four teaching areas (self-help, communication, socialization and pre-academic). The child who was ready for "school-like skills" was offered experiences in the following areas:

A--Recognition Skills:

1) Shape recognition--form boxes and boards, grouping by shape, recognizing similarities in shape, learning to draw the shapes first by using, and when necessary, having the teacher move the child's finger to trace the shape, then a stencil to outline the shapes and finally free hand drawing. During this process, the child's visual attention was focused on the task by repeating "Look," by naming the shape, giving physical and verbal direction for arm and hand movements. Samples of the shapes were given and when a child was able, he was taught to discriminate pictorial symbolization of the shape (circle-ball).

2) Color recognition--sorting colors using materials made by the staff in which shape was held constant and colors varied. Specifically one staff member, using plastic margarine tubs, made slots in the top outlined with a primary color corresponding to similarly colored discs. The child was required to put the colored disc in the same colored slot. Paper cups were covered with construction paper of primary colors and like colored cubes were to be put in the cup.

Pegs were fixed on peg boards according to color. The holes were outlined by notebook reinforcements colored by magic marker in the same colors as the pegs.

Another advantage of these tasks is that the child was presented with the need to deal with one item at a time and was rewarded by approval each time he was correct in selecting the right color. Since this kind of task could be "completed" at the point which the teacher felt the child could tolerate (3 colors/ 20 cubes) the child nevertheless could achieve a sense of mastery and be positively reinforced for success immediately and constantly.

More sophisticated levels of color recognition include sorting a large number of multi-colored items, naming colors and selecting a color when it is named by the adult.

3) Size discrimination--stacking rings which only could be assembled from

largest to smallest, sorting blocks leading to a sense of bigger and smaller with accurate kinesthetic and verbal reinforcement. This task developed from its simplest level of handing the child the proper size (to insure success immediately), to giving him a choice of two very different sizes only one of which fit, to lining up in size order, to allowing him to complete the task on his own.

The form of the completed pyramid was emphasized by guiding the child's hands over the completed toy, emphasizing bigger to smaller with verbal clues. Jig-saw puzzles of various degrees of difficulty combined learned color, shape and size concepts but added the need for a higher degree of dexterity and greater perceptual sophistication in seeing parts and wholes. Once a child had achieved the ability to work a puzzle it was used to help him see that the parts made a whole different from the individual parts and focused attention and discussion on the meaning of the entire picture. (For example, one puzzle picturing a school bus on a street with children in it was first assembled by the child with attention to shape, color and size of individual pieces. Then the physical task having been completed the child was directed and helped to look at the picture and there was simple discussion of the relationship of the picture to real life. Much use was made of concrete toys or real objects corresponding to the picture.

B--Manipulative Skills:

1) Block building--stacking, knocking over and re-stacking. Often the teacher held the child's hand, grasped a block and moved it appropriately. This was also used as a simple give-and-take interaction in which the child learned to wait for his turn while the teacher took hers.

2) Ball playing--the ball was rolled to the child and training director or the teacher worked with the child to help him

a--focus on the ball

b--move his body to manipulate the ball

c--learn to tolerate waiting for it to return to him

d--judge the spatial relationship of the ball to himself and how he need to move to get it

For those children for whom a ball in space was too frightening in its unpredictability, work was initiated with a bean bag. In some cases, it was necessary to begin by sitting on facing chairs, teacher knee-to-knee with the child, and simply hand the bean bag back and forth, sometimes moving the child's hand for him and focusing his eyes on the bean bag, with constant and emphatic approval and reinforcement for each appropriate motion. Very gradually, the space was widened, and in slow stages, the child was taught to stand and throw (very short distances at first) to the teacher and to receive the bean bag back. This process sometimes took weeks to accomplish literally reinforced by activity at home. Emphasis to the parent was again on the importance of involvement with another person, rather than just the physical skill. Parents were reassured when they heard and saw the teacher praise their children. While the parents were becoming more realistic in their expectations for their children, which usually meant a painful recognition and acknowledgment of their limitations, they were simultaneously encouraged and heartened by hearing their children praised for this new learning. Often this praise was the first that they had ever heard another adult give their child.

f) Small muscle control and discrimination: while this area was concentrated by almost every activity, certain tasks were designed specifically to train eye-hand coordination. Whenever possible, this kind of activity was offered in such a way that the child could see immediate results from his use of his hands and recognize his own effectiveness. Materials used included: a surprise box, requiring different finger and hand motions (pulling, pushing, turning) to open compartments containing attractive objects; marble runways, which focused attention by the spiral motion of a marble, which moved only when the child released a small catch; perception cylinders which required arm and hand manipulations to move pellets through a maze; soap-writing on a large mirror, which afforded opportunity for pre-writing, large and small arm movements, immediate reinforcement and sense of accomplishment, followed by cleaning with a damp sponge (a by-product of this was attention to the child's body motion as he saw his own reflection); a lock-box, which required differential fine-finger manipulation to release catches on compartment locks to get at hidden treats.

g) Coloring, cutting and pasting, painting, records, books:

a. Stencils were made by the teachers in basic forms. These were used to help the child isolate the space to be filled in by crayon and to focus on the area to be colored and stay within required boundaries. After this was mastered, the same size and shape was colored without the use of a stencil. This procedure was used initially for our children rather than the more traditional movement from unrestricted finger painting and easel painting to form coloring, because they were unable comfortably to participate in an unbounded activity and needed limits until they became more proficient in their use of painting and coloring materials.

b. Cutting was taught by the use of a four finger scissors designed and made for this program by one of our teachers. This equipment enabled the child to put thumb and index finger in the small scissors handle while the teacher's thumb and forefinger fit into an additional pair of rings. The hand motion in cutting made the child's hand move in the necessary motion. Cutting at first was in straight lines (fringes), and progressed to large circles, angled forms, and eventually, complex shapes. The child learned the cutting motion as the teaching motion as the teacher gradually withdrew her physical manipulations. The mother, seeing this, was willing to offer children's scissors to the child at home, under her appropriate supervision.

c. Finger painting was introduced very carefully for both parent and child. Most of the children were reluctant and in some cases really terrified of contact with the paints and had to be gradually introduced to this. In some instances water play was used to begin moving the child toward finger painting. The teacher put her hands into the water or paint and then over and or held the child's hands. Often she helped the child move his hands on the paper which offered the necessary security and allayed his fears. Similarly the child was involved with clay, play dough and pasting. All of these activities afforded immediate satisfaction to the child and an occupation for his time at home.

d. Records: Many of our children were reported by their parents to "love music." They watched the record spinning but evinced no interest in the words or music. We see this as an avoidance mechanism and many parents

were surprised when we demonstrated that the child's interest in music did not exist when he couldn't see the record go round. Records were never used just for listening purposes. Strong simple rhythm records were marched to, clapped to, jumped to and in some way always accompanied by body activity directed by the teacher physically, when needed. Rhythm instruments were frequently used with the records. Musical activity, i.e. "ring around the rosy," was sometimes used as a springboard for involvement with another child, his teacher and occasionally a mother.

Most parents had made concerted efforts to interest their children in books and listening to story telling. Without exception, the level at which this kind of activity was approached was unrealistic. None of our children were able to control their impulsivity sufficiently to refrain from throwing, tearing or mouthing the book. It was absolutely impossible for these children to look at complex pictures or listen to lengthy stories. After we had taught the children to sit, attend, and keep their hands still, we introduced the simplest picture books designed to be "baby's first book" with one picture per page of simple recognizable everyday objects in the child's life (shoe, apple, key, comb, etc.). The real object corresponding to the picture was used in conjunction with the book. The objects were matched, named, felt. From single one picture per page books, we went to realistic colorful ads in magazines depicting common household objects. Parents used this technique at home and used available household objects to help the child recognize the two dimensional small picture symbolizing the three dimensional real object. It was possible to expand this type of experience to recognizing children, adults, scenes depicting interaction among people, ordinary street scenes and various symbols representing everyday life. At no time would we offer materials designed for fantasy and imagination such as "Cat in the Hat," talking animals, evening hymns, walking on hind legs. We cautioned parents against such materials, explaining the importance of helping the child recognize reality.

Some of our children came to us reading complicated material such as the New York Times with varying, usually minimal, degrees of comprehension. Some mastered perseveratively, some wrote correctly spelled words. When children came to us with these "skills," we endeavored to find their level of comprehension and relate these skills to that level. For example: a specific child who could "read" the New York Times word for word, vowel, spell correctly, was offered reading to which action could be acted concretely: we would write "Billy, get two cookies," "Jump 3 times." He read this aloud and then was shown what the words really meant. We helped his mother see that the reading was an avoidance mechanism as often mothers learned that string twirling and record watching were equally avoidance, but that such skills could be used to help him relate to reality, usually on a much simpler level than the "reading" had suggested.

In the foregoing discussion of program and areas of teaching, an arbitrary classification scheme was used. We do not feel that these areas are discrete or unique so that it is possible or desirable to teach them isolated one from the other. By selecting a variety of examples, we hope to convey the flavor of the actual teaching context of the program. We must emphasize the necessity and de-

sibility of a creative, sensitive teacher flexibly selecting activities and materials suitable for a specific child at a specific time in his development and mood, and understandable and adaptable for his observing parent. At the risk of belaboring this point, we feel it necessary to restate the focus of the program which was one of parent education: helping the parent teach and manage her child. Whenever possible, teachers clarified their work with the child with immediate brief comments to the parent amplifying, when necessary, at the end of the session. Ways of using the approaches at home were always suggested. Any activity of any session for any child had to combine aspects of our larger goal.

To recapitulate, the parent group, a mandatory part of the program, met in 1½ hour sessions alternate weeks. In order to retain the intimate quality of the program, the groups were planned to include a maximum of eight parents, the social worker and training director. Occasionally, we would have as many as ten parents (fathers, visiting grandmothers and other interested family members) but the basic group size was controlled. Therefore, there were three groups each year, two in the mornings and one in the afternoon offering parents a choice of most convenient meeting time. No Home Training children were permitted to be brought to groups, and baby sitting arrangements had to be made by the parent at home. When parents accepted participation in the program, this requirement was clearly and emphatically stated.

Due to space limitations already discussed, during the first year of the program the group met in the social worker's office in the old League School building. Each meeting was very crowded and the parents were squeezed together, which helped to develop an atmosphere of camaraderie, informal ease and mutual interest and support. There was nothing in the situation which appeared rigid or overwhelming, and the very nature of the small physical arrangement seemed to reassure parents and help put them at their ease. As a result of this experience, when the League School moved into its new quarters the following year, parents' meetings were held in the training director's office rather than in one of the available larger meeting rooms. This office had become the physical heart of the program and parents had become accustomed to visiting it each week to talk with the training director for a few minutes. The only change in the nature of the meetings was that coffee and cake were offered at each meeting.

On rare occasions, League School visitors, particularly parents of disturbed children who were keen on learning about establishing similar services in their area of the country, sat in and participated in the group discussion, only after the group members had indicated their willingness to have them join us. The group was always asked in advance and, without exception, agreed to share this experience with others. Also, Home Training teachers occasionally joined group discussion. The groups were formed, as has been stated, at the convenience of the family and each group represented a range in age, race, religion and educational background. The heterogeneity enriched rather than hampered the discussion and helped parents recognize that they could learn from each other.

Our records indicated that attendance at group meetings was not only regular, but exceeded expectations for group attendance in similar settings. Parents were responsible for notifying us if they could not attend and some were asked if they might "make up" a missed session in another group. The usual reason for absence was illness of the parent or child. Weather was not a factor. Through cold, rain, snow, dirt and hail they came.

Discussion leadership was shared by the social worker and training director. Neither had had the experience of joint group leadership, although both had had extensive experience in working with groups of parents of normal and handicapped children. It was planned that by organizing the groups with dual leader-

about him." Alternately, many families came away with the impression that their child had normal ability and would grow out of his problems or "snap out of it."

Many families had sought to clarify their bewilderment by using resources available to them -- libraries, family, friends, neighbors, professionals in other fields, etc.

We were keenly aware of the emotions surrounding such experiences and distorted expression of this confusion and these feelings and repeatedly made efforts to recognize, clarify and resolve them throughout the entire year.

This was of utmost importance because parents who had experienced unsatisfying relationships with professionals understandably came to our program expecting a repetition. They were guarded, defensive, often hostile, and always skeptical. They often felt the need to present an unrealistic picture of their child so that he would be acceptable to the program (for example, they frequently did not mention that their children were not toilet trained, or weaned, or that they bit, spat, etc.), even though we made no such conditions. The first step in helping them feel more secure at the League School was to have them see the teacher and training director weekly welcome them and their children and accept the child's definite and unacceptable behavior as a mutual problem on which we would all work. This kind of group discussion, accompanying an understanding of the parents' past experiences with the child and recognizing the extraordinary difficulties inherent in day to day living, enabled parents to begin to trust the degree of our commitment and involvement with them and their children and to begin to use the learning they obtained in the observation of the teacher-child individual sessions.

Acceptance of these parents by the staff of the school and the program as capable, competent, human adults who were trustworthy made it possible for the parents to trust us and the program. Then, they could relax, lower their defenses, share the real problems which their children presented to them, communicate their fears and desires for the children and implement at home the programs recommended by demonstration for their children. They were free to hear and see and attempt to incorporate those ideas and suggestions offered them by us.

From the beginning, the training director and social worker, in planning the goals of the program, used an approach other than that of traditional group therapy. We found it important to work through the strengths of the parents, while being aware of their vulnerable areas. It was not our function to reconstruct parental personalities through insight, penetration of defenses and reorganization toward healthier defenses and reactions, before working on the problems presented by the child's illness. Rather, we tried to reinforce their images of themselves as competent, capable, effective individuals who were living with a child whose mental illness had an impact on every area of their lives. The entire concept of this program gave credence to our often stated conviction that parents could and wanted to be partners in constructive efforts for their children, and indeed, that they, and only they, could to some unknown degree, be the architects of positive change in their child. At each and every meeting, it was expected that any significant changes in the child's behavior could not be the result of the one hour a week the child spent with the teacher. Change could

occur only as a result of the parents' selecting from the teaching demonstrations those methods and techniques which they understood and which could be comfortably incorporated into their own child-rearing practices. The methods and techniques which were demonstrated to a specific parent had been planned for that parent and child, using our accumulated information, knowledge and sensitivity about that family unit. We used, as an example, in the group meeting, the idea that we offered a large assortment of materials and methods — a smorgasbord or tray from which they were encouraged to make their own selection. They were encouraged to reject that which they didn't feel was right for them, and to express these feelings without being fearful that they would be pressured by us to undertake anything which was not acceptable to them. It was often observed that some of the suggestions which had been ignored were subsequently picked up and implemented effectively. There were some areas in which it was possible for us to say forthrightly that some basic desired changes could not be accomplished without a certain action on the parents' part. For example: a child cannot be toilet trained while wearing diapers or weaned while being given a bottle. This generalization from our experience was offered to the parents, but the decision as to whether and when to act was theirs. While we avoided pressuring a parent to take action, we recognized with them the difficulty of the decision and urged them not to undertake a new challenge until they were prepared to be consistent and follow through. Concurrently, we used the experiences of the other parents in their group to give them needed support and encouragement toward taking the next difficult step. At the same time, we were aware of and made every effort to avoid any feeling of guilt for inaction or partial or complete failure when a change was attempted. We were ever aware of the limitations of the child and only suggested small and realistic goals, referring constantly to the individual child's developmental levels and the cues he gave us about his readiness.

While, in some cases, there was almost unbelievable accomplishment, we always prepared parents for the fact that change was likely to occur in very small increments, each increment would require considerable time, thought, and effort, and that consolidation of gains would be slow.

The social worker and the training director worked in the group to develop a feeling of mutuality of interest and concern about every child no matter what his level of development. Therefore, it was possible for each parent in the group to draw strength and encouragement from any child's growth and change. We used the fact that there was encouragement, pride and hope among the parents by giving equal recognition to each parent for any change in their own child's behavior whether at a primitive or very advanced level. In other words, we felt that one child's weaning was as important as another child's learning to read, in terms of the effort of the parent in effecting these changes and as much deserving of praise. For this same reason, it was possible for each group member to feel strengthened by each success of any child and to be encouraged to continue to make appropriate efforts with their own child.

The group leaders were constantly aware of the vulnerable areas and soft spots in the personalities of members of the group. Ineffective and weak defenses were supported and our efforts were geared toward making life with the child more comfortable in order to protect them from brittle and inadequate defenses,

rather than to strip them and reveal parental weaknesses. Many examples could be given but the most outstanding was the family of a very defective non-functioning, non-verbal, screaming, autistic child, whose father was an elderly, dapper, charming and well-spoken gentleman who had detached himself emotionally from this child and from his wife and found his emotional satisfactions with other people. His great pride centered around academic accomplishment, embodied by an older son, who was a National Merit Scholarship winner. He saw the the sick child's disability as having been created and fostered by his wife to punish him and to make the few hours he spent at home unpleasant and disagreeable. He felt that the child was being trained by her to destroy his possessions. His wife, a calm, competent, attractive woman, who had successfully raised five other children, was furious with her husband and made constant, futile attempts to involve him with his sick child, all of which failed. When first seen together, each talked to the interviewer with his back toward the other, and quietly and constantly contradicted each other.

We recognized that this basically was a problem in marital relationship and their child's very real problems were being blamed by each parent as the root of the disharmony. At first, both parents attended group meetings, but only separately, but both described bitter family quarrels over the child's jumping on and dismantling his father's bed. While the wife presented this as a ridiculous and childish issue, the husband clearly indicated that his bed and his other possessions were of utmost importance to his own idea of himself.

We neither discussed the marital problem nor interpreted the underlying dynamics, but accepted as real the need to modify the child's behavior. To this end, we presented a fact to the mother that the father could not move toward the child while the latter was permitted to invade and violate his possessions and in reality that the behavior would be considered unacceptable in anyone's judgment. Part of the mother's reluctance to attempt to modify this behavior was due to her feelings of defeat when all her previously successful child-rearing practices had failed with this child. Only after she was able to achieve some small but consistent successes using new techniques and approaches offered in the program, was she enabled to undertake this challenge and so uncertain was she of accomplishment that she did not reveal her efforts in this direction to teacher, training director or the group. Information about this change came to us from her husband, who felt that his position as head of the family had finally been properly acknowledged and he was now free to work together with her and us toward helping the child. Following this, these parents attended meetings together.

A note should be made that the essence of the program is to offer parents a frame of reference within which they can continue to work with their child after their relationship with the Home Training and the school is over. It is hoped that in one year they will have learned enough to be able to continue to formulate realistic goals and take steps toward achieving them based on their mature judgment and competence which have been developed and expanded in the program. While we indicate our continuing interest in the progress of the children and are available for phone discussions from time to time over the years, it is our aim to encourage independence in decision-making and implementation of it. While we

conception the parents' need for support as they consider themselves in a new unfamiliar philosophy and orientation in the early stages, our goal is toward helping them achieve some self-awareness in their own ability to function as capable parents.

Content:

There was literally no area of living that was not raised and discussed within the relaxed permissive atmosphere of the group. Included in these discussions were problems between husband and wife in their relationship and attitudes toward the child; the child's relationship to his brothers and sisters and some of the inherently sensitive areas concerning these relationships; the interactions of living in a family with sick and well children; reactions and attitudes of extended family members, friends, neighbors and strangers and how to deal constructively with such reactions; community opinions and attitudes and their impact on the individual family. Each of these areas was discussed repeatedly and lengthily from the various facets impinging on the social life of parents and children living in a community.

One of the most sensitive and painful subjects discussed in the group and repeatedly returned to was long-term planning for the sick child. At the first parental contact with the Home Training program, parents were emphatically told that acceptance in this program did not and could not promise eventual admission to League School regular program or any placement in any school, or basic changes in the child. This was repeated in group and we avoided attempting any prediction of future improvement or final status of the child's development. It was our conviction that no matter what degree and kind of change, if any, was possible in the child, the program had enormous value in helping the parent see the child realistically in order to be able to plan meaningfully for his immediate and long-term living.

Since we recognized that such planning often had to include consideration of residential living or hospitalization, the group was helped to face discussions in this sensitive area and to return to such discussion from time to time as parents developed the strength to think about planning for their children in an environment other than home. It was presented by training director and social worker as one alternative living plan which for some children and some families was dictated by the child's ability to live as fully as possible. It was always presented as an environment in which a child might be helped to function most fully rather than as a dead-end, "putting away," rejecting, end-of-the-road plan. Since the training director and the social worker raised the idea of institutionalization, it became possible for the parents to consider such planning without the strong emotional component that guilt, ignorance and fear had engendered in their thinking in this area. Most parents were surprised to learn that hospitals encouraged parental visiting, the child's frequent visits home and parental organizations to strengthen hospital services to the children. Further, many parents did not know that they did not commit the child for life placement in hospitals and were free to change their minds and return the child home. The fact that the group leaders saw hospitalization or residence as a positive alternative and not as family rejection of the sick child helped the parents confront what had been heretofore thought of as irre-

The children randomly assigned to the Control Group remained on the League School waiting list as did the children in the experimental group. Telephone contact with the school was handled by the social worker and was the only contact with the School available to waiting list children and their parents during the waiting period. Following the initial screening (described earlier), control group families who telephoned concerning openings for service were all told by the social worker

1) that League School had no available openings for service

2) that when an opening occurred in a program suitable for the child's age and functioning the family would be asked to bring the child for further screening

It was not unusual for children on the League School waiting list to also be enrolled on the waiting list of similar schools. Usually families phoned League School when an opening occurred in another facility to inform us that their child had been accepted for full or part-time program. The social worker did request a re-evaluation of the youngster before he began a new program if he had been in our control group for 12 or more weeks. Similarly, family plans for residential treatment or hospitalization of the mentally ill child were often shared with League School social worker and families usually cooperated in re-evaluation at League School prior to placing the child.

League School, in cooperation with Downstate Medical School's experimental drug program, had, for a year prior to the Home Training program, made available to Downstate names and addresses of youngsters up to the age of 10 on the League School waiting list. This cooperation continued during the Home Training program. Waiting list families received letters from Downstate offering them participation in the drug program, thus in some cases, using the waiting list time to establish the child on effective medication. Families made their own decisions about the acceptance of such a program but information about their participation was provided to League School by Downstate.

At the end of 30-40 sessions, the control group children were re-evaluated. The families were asked to bring the youngsters so that their current levels of functioning could be assessed and planning of program for the child in the coming year could be realistically related to his current needs.

At the end of the first year's program, the children remaining in the control group were accepted in the experimental program of the Home Training program in a cross-over design. Many of the children who started in the control group in the first year (September 1966-June 1967) with speech and some functioning (toilet trained, etc.) had been accepted in other facilities and had dropped out of the study. Those still without a program, then, entered the second year's experimental program.

Since the thrust of this program was to develop a meaningful intervention for waiting list families and their mentally ill children and since such intervention is a pressing need due to lack of facilities, personnel and funds in agencies serving such children, the results of the study offer exciting possibilities for further development and use of this program within the context of various kinds of non-residential services. Facilities and services in which the emphasis is education (for the parent, for the child or both) can replicate or adapt this program to serve their children and families and to make productive the waiting list time. Adaptations of this program, which focus on the young very sick child living at home awaiting service can be useful to family service agencies, child guidance clinics, special nursery schools, private school special class facilities, state schools and hospitals with waiting lists, private consultants and practitioners oriented to an educational approach to children and parents who are not a part of an organized agency.

The physical requirements of such a program are simple and available in all communities: a room in which the teacher, mother and child can work together, early childhood toys and everyday easily obtainable household objects. Staff, however, needs careful evaluation and consideration since the effectiveness of such a program is totally dependent on the skill of the staff. The teacher must be creative, sensitive and flexible in relationship to the child's needs as well as to the parents' level of understanding and ability to implement the program within the context of the home and family. These attributes must, of course, be present in a teacher highly trained and experienced in special education or early childhood education. Even such a teacher will need and must have available to her a supervisory person with whom she can consult, plan program, communicate her questions and receive educational guidance and emotional support. The supervisor must be skilled in multi-disciplinary approaches to child and parent with training in education, social work, educational psychology, psychology or psychiatry with advanced skills in special education and an ability to see a situation from many points of view. This supervisor would also function as parent group discussion leader.

It is our opinion that this program offers an effective realistic and practical approach to the very young severely ill child for whom traditional therapies have often been unavailable and in many cases, when available, their value for such children has been questioned. Similarly the approach to parents in this program relates concretely to the real problems of day-to-day living and is built upon recognition of the competence of parents to effect their child positively and a recognition of their eagerness to make constructive use of such a program.

Since this program of a direct approach to parents has been demonstrated to be effective, the program's results must lead to serious reconsideration of certain theoretical positions regarding the etiology of childhood mental illness. While we are not taking the position that childhood mental illness is never the result of noxious parental influences or damaging child-rearing practices, we feel that the results of this research must enlarge our conceptualization of both cause and

[illegible]

The need for further research in developing programs for the young waiting list mentally ill child is widely recognized. We consider this a pilot program and hope that it will stimulate thinking and subsequent planning for programs directed to filling the same need. Programs developed for the child living at home and involving his parents are compatible with current professional opinion now being implemented by governmental and private agencies moving toward making community services available to the child for whom home living is feasible and desirable. Programs, such as the one outlined here, may, in some cases, make it possible for the young mentally ill child to remain in the home while being better prepared for participation in non-residential full-time programs (such as special classes or special schools) when such programs become available.

[illegible]

[illegible]

Table 1 compares the characteristics of the control and experimental groups with regard to religion, ethnic background, parental education, as well as the subject's level of speech development. As can be seen in the table the groups were comparable with regard to these variables.

To determine the efficacy of the Home Training Program, an analysis of the Vineland Social Maturity Scale and the items in the Examination Behavior Rating Form was performed.

Data were collected when the child began and again when he completed the Home Training Program. The information in the Vineland Social Maturity Scale was obtained during an interview with the parents. The Examination Behavior Rating Form describes the child's behavior during the psychological evaluations and was filled out by the psychologist who was blind as to which group the child had been assigned.

The analysis focused on the following questions:

1. Was there a significant improvement in the child's level of functioning during the course of the Home Training Program?

2. Was there a significant improvement in the level of functioning of the children in the control group (over a comparable period of time as in item 1 above)?

TABLE 1

[illegible]

	Control		Experimental	
	N	%	N	%
1a. Religion				
Hebrew	1	6.5	4	15.4
Protestant	9	40.9	13	50.1
Catholic	12	54.5	14	53.5
Total	22	100.0	26	100.0
1b. Ethnic Background				
White	13	59.1	12	46.2
Black	9	40.9	13	50.0
Puerto Rican	0	0.0	1	3.8
Total	22	100.0	26	100.0
1c. Mother's Education				
Less than High School	3	13.6	6	23.1
High School Graduate	13	59.1	13	50.0
Part College	5	22.7	4	15.4
College Graduate	0	0.0	2	7.7
Unknown	1	4.6	1	3.8
Total	22	100.0	26	100.0
1d. Father's Education				
Less than High School	3	13.6	6	23.1
High School Graduate	10	45.5	11	42.3
Part College	7	31.8	4	15.4
College Graduate	1	4.6	4	15.4
Unknown	1	4.6	1	3.8
Total	22	100.0	26	100.0

Table 1 (continued)	Control		Experimental	
	N	%	N	%
Is Subject's Speech Unintelligible				
Speech	9	40.9	13	59.1
No Speech	13	59.1	14	51.9
Total	22	100.0	26	100.0

3. Did a significant number of children in the experimental group improve as a result of the Home Training program?

4. Did a significant number of children in the control group also improve (over a comparable period of time as item 3)?

Both groups contained children at widely different levels of functioning. This was important in relation to differences in levels of function at the beginning of the program as well as in their ability to talk. Consequently, a factorial analysis of Covariance by presence of speech and group placement was performed. This analysis, by adjusting post scores to compensate for differences in baseline scores, enabled us to determine whether:

5. The children in the experimental group improved to a significantly greater extent than did the children in the control group.

In addition we determined whether:

6. The differential improvement in the experimental group occurred regardless of speech level, or whether the program was particularly effective among either children with, or children without, speech.

Table 2 contains the analysis of changes in Intelligence and Social Maturity. As can be seen in the Table neither group changed significantly with regard to Intelligence. The experimental group did show significant increases in their level of social maturity as well as in six of the seven sub areas of the Vineland (there was no change with regard to the area of Self-Help Eating). With regard to the control group only two areas, Socialization and Locomotion, increased significantly.

TABLE 2

CHANGES IN INTELLIGENCE AND SOCIAL MATURITY

	Control[a]			Experimental[a]		
	$\bar{d}$	N	t	$\bar{d}$	N	t
I.Q.	-0.82	22	0.364	+1.82	26	1.349
Social Quotient	-0.09	22	0.209	+7.81	26	5.247
Socialization	+1.05	22	3.737	+1.33	26	4.238
Communication	+0.13	22	0.279	+0.70	26	2.73[c]
Self-Help General	+0.29	22	1.679	+0.81	26	3.846
Self-Help Dressing	-0.18	22	0.549	+1.16	26	3.46[c]
Self-Help Eating	+0.13	22	0.439	+0.31	26	1.15[c]
Occupation	-0.04	22	1.469	+1.04	26	4.998
Locomotion	+0.42	22	2.15[d]	+0.76	26	2.14[d]

[a]Two tailed test of significance. [b]One tailed test of significance. [c]Not significant.
[d]$p < .10$, [e]$p < .05$, [f]$p < .025$, [g]$p < .01$, [h]$p < .005$, [i]$p < .0005$

To determine whether a significant number of children in either the experimental or control group improved a sign test was performed. As can be seen in Table 3 the results closely parallel those presented in the previous table. The

number of children who showed an increase in intelligence was not significant in either the experimental or control group. With regard to the Vineland Social Maturity Scale, a significant number of children in the experimental group showed an increase in their Social Quotient as well as in all seven areas of the Vineland. In the control group, on the other hand, the number of children improving was significant in only two of the sub areas (socialization and locomotion).

TABLE 5

DATA TABLE OF OBSERVED PROBABILITIES AND CRITICAL VALUES

	Control[a]			Experimental[a]		
	n	r	p	n	r	p
S.Q.	9	10	0.898	19	19	.000
Social Quotient	11	10	0.855	19	9	.001
Socialization	10	7	.001	18	9	.001
Communication	7	5	.773	13	9	.040
Self-Help General	11	6	.113	17	6	.001
Self-Help Dressing	6	3	.226	11	6	.004
Self-Help Eating	6	4	1.000	14	6	.004
Occupation	4	03	.188	11	3	.001
Locomotion	10	9	.039	13	9	.001

[a]Two tailed test of significance [b]One tailed test of significance

Intelligence and Social Maturity:

Tables 6a through 6i contain the results of the factorial analysis of covariance for Intelligence, Vineland Social Quotient as well as the sub-areas of the Vineland. The analysis of covariance eliminates the influence of baseline differences on the outcome scores by adjusting the post scores as if all groups had started from the same baseline position. Positive differences between scores represent an increase, and negative differences represent a decrease in scoring.

Table 6a contains the results of the analysis of covariance of Intelligence. As is shown in the table there was a significant increase in intelligence among the subjects in the "speech" group regardless of experimental condition. A multiple range test of the adjusted outcome scores reveals, however, that the speech effect occurs only in the control group. In addition, the results of the multiple range test reveals that with regard to the children in the No Speech group the experimental condition (the Home Training Program) was effective in increasing their intelligence score in comparison to similar children in the control group.

With regard to the Vineland the analysis indicates that children in the experimental group showed a significant increase in their Social Quotient (Table 6h), Self-Help General (6c), Self-Help Dressing (6f), Self-Help Eating (6g), and Occupation (6i), in comparison to subjects in the control group.

The multiple range test indicates that in all cases the above results were true for children with speech, as well as those without speech.

With regard to one variable, Self-Help General (6c), the experimental condition was more effective for the speech group who had a significantly higher adjusted post score than did the children without speech who were also in the experimental group.

The remaining three areas of the Viewfield, Installations (IN), Communications (AB), and Conversations (IB) did not reveal any significant differences as a function of either the experimental condition, or speech level.

TABLE 4b
ANALYSIS OF VARIANCE FOR LOG SECONDS OF FIXATIONS
BY SPEECH LEVEL AND CONDITION[1]

	Control		Experimental	
	$\bar{X}$	N	$\bar{X}$	N
Speech	61.19	8	66.87	12
No Speech	58.83	13	64.76	14

ANALYSIS OF VARIANCE FOR LOG SECONDS

Source	Sum of Squares	d.f.	Mean Square	F Ratio	p
Speech Level	97.23	1	97.23	6.23[3]	< .05
Group	3.34	1	3.34	0.21	N.S.
Interaction	13.81	1	13.81	3.14	N.S.
Error	276.94	43	6.43		

ANALYSIS OF VARIANCE FOR SECONDS TRANSFORMED

Speech	61.19	66.87	N.S.
No Speech	58.83	64.76	< .05[3]
p	< .05[3]	N.S.	

[1]Method for unequal subclasses used. [2]Cell means were adjusted to take into account baseline differences. [3]Two tailed test of significance. [4]One tailed test of significance.

TABLE 4b
ANALYSIS OF VARIANCE FOR LOG SECONDS OF FIXATIONS ON INSTRUCTIONS
BY SPEECH LEVEL AND CONDITION[1]

	Control		Experimental	
	$\bar{X}$	N	$\bar{X}$	N
Speech	51.88	8	60.08	12
No Speech	25.58	13	55.64	14

ANALYSIS OF VARIANCE FOR LOG SECONDS

Source	Sum of Squares	d.f.	Mean Square	F Ratio	p
Speech Level	1.248	1	1.248	0.111	N.S.
Group	57.139	1	57.139	5.014	< .05[3]
Interaction	0.047	1	0.047	0.004	N.S.
Error	479.663	1	11.159		

ANALYSIS OF VARIANCE FOR SECONDS TRANSFORMED

Speech	51.88	60.08	p < .025[4]
No Speech	25.58	55.64	p < .05[3]
p	N.S.	N.S.	

[1]Method for unequal subclasses used. [2]Cell means were adjusted to take into account baseline differences. [3]Two tailed test of significance.

[illegible]

	[illegible]			
	[illegible]			
	[illegible]			

[illegible]

[illegible]	[illegible]				
[illegible]	[illegible]		[illegible]	[illegible]	
[illegible]	[illegible]		[illegible]	[illegible]	
[illegible]	[illegible]		[illegible]	[illegible]	
[illegible]	[illegible]		[illegible]		

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	[illegible]			
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	[illegible]			

[illegible]

[illegible]	[illegible]				
[illegible]	[illegible]		[illegible]	[illegible]	
[illegible]	[illegible]		[illegible]	[illegible]	
[illegible]	[illegible]		[illegible]	[illegible]	
[illegible]	[illegible]		[illegible]		

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	[illegible]			

[illegible]

[illegible]	[illegible]				
[illegible]	[illegible]		[illegible]	[illegible]	
[illegible]	[illegible]		[illegible]	[illegible]	
[illegible]	[illegible]		[illegible]	[illegible]	
[illegible]	[illegible]		[illegible]		

[illegible]

[illegible]

	[illegible]		
	[illegible]		
	[illegible]		

[illegible]

TABLE 6f
ANALYSIS OF COVARIANCE OF SELF HELP DRESSING (VINELAND)
BY SPEECH LEVEL AND GROUP[1]

	Control[2]		Experimental[2]	
	$\bar{Y}$	N	$\bar{Y}$	N
Speech	3.71	9	4.32	12
No Speech	1.83	13	3.69	14

SUMMARY OF ANALYSIS OF COVARIANCE

Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.329	1	0.329	2.70	N.S.
Group	2.591	1	2.591	12.516	$< .005^3$
Interaction	0.000	1	0.000	0.000	N.S.
Error	8.968	43	0.207		

SUMMARY OF MULTIPLE RANGE TEST

Speech	3.71	4.32	$p < .025^3$
No Speech	1.83	3.69	$p < .025^3$
P	N.S.	N.S.	

[1]method for unequal subclasses used. [2]post means were adjusted to take into account baseline differences. [3]one tailed test of significance.

TABLE 6g
ANALYSIS OF COVARIANCE OF SELF HELP EATING (VINELAND)
BY SPEECH LEVEL AND GROUP[1]

	Control[2]		Experimental[2]	
	$\bar{Y}$	N	$\bar{Y}$	N
Speech	2.93	9	4.00	12
No Speech	2.34	13	3.36	14

SUMMARY OF ANALYSIS OF COVARIANCE

Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.369	1	0.369	1.650	N.S.
Group	0.930	1	0.930	4.160	$< .025^3$
Interaction	0.001	1	0.001	0.004	N.S.
Error	9.640	43	0.224		

SUMMARY OF MULTIPLE RANGE TEST

Speech	2.93	4.00	$< .05^3$
No Speech	2.34	3.36	$< .05^3$
P	N.S.	N.S.	

[1]method for unequal subclasses used. [2]post means were adjusted to take into account baseline differences. [3]one tailed test of significance.

TABLE 4b
ANALYSIS OF COVARIANCE OF OCCUPATION (VINELAND)
BY SPEECH LEVEL AND GROUP[1]

	Control[2]		Experimental[2]	
	$\bar{Y}$	N	$\bar{Y}$	N
Speech	3.76	9	3.80	12
No Speech	3.35	13	3.79	14

SUMMARY OF ANALYSIS OF COVARIANCE

Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.156	1	0.156	1.12	N.S.
Group	2.183	1	2.183	15.70	$< .001$[3]
Interaction	0.003	1	0.003	0.002	N.S.
Error	6.014	43	0.139		

SUMMARY OF MULTIPLE RANGE TEST

Speech	3.76	3.80	$< .025$[3]
No Speech	3.35	3.79	$< .025$[3]
P	N.S.	N.S.	

[1]method for unequal subclasses used. [2]post means were adjusted to take into account baseline differences. [3]one tailed test of significance.

TABLE 4i
ANALYSIS OF COVARIANCE OF LOCOMOTION (VINELAND)
BY SPEECH LEVEL AND GROUP[1]

	Control[2]		Experimental[2]	
	$\bar{Y}$	N	$\bar{Y}$	N
Speech	3.28	9	3.97	12
No Speech	2.12	13	2.83	14

SUMMARY OF ANALYSIS OF COVARIANCE

Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.233	1	0.233	1.68	N.S.
Group	0.072	1	0.072	0.46	N.S.
Interaction	0.128	1	0.128	0.82	N.S.
Error	6.747	43	0.156		

[1]method for unequal subclasses used. [2]post means were adjusted to take into account baseline differences. [3]one tailed test of significance.

Behavior During Psychological Evaluation:

Table 5 contains the analysis of differences scores of both the experimental and control groups for the global behavior score (mean of all behavior ratings), as well as for each of the fifteen items contained in the rating form.

As the results indicate both groups showed a significant improvement in their global behavior. With regard to the component items of the scale the subjects in the experimental group showed a significant increase (improvement) in ten of the fifteen items (1. Separation, 2. Participation, 3. Activity Level, 4. Willingness to Follow Instructions, 5. Hyperactivity, 7. Hostile-Aggressive Rejection, 8. Passive Rejection, 9. Attention Span, 14. Comprehension of Language, and 15. Awareness of Failure). With regard to variable No. 13 (Appropriateness of Communication) the experimental group showed a significant decrease (worsening).

In the case of the control group a significant increase (improvement) in behavior was found in only three of the fifteen items in the Examination Behavior Rating Form (5. Hyperactivity, 9. Attention Span, and 15. Awareness of Failure).

There were no significant changes in any of the other variables.

A Chi Square analysis (using the Yates Correction for Continuity) revealed that the number of items in which the experimental group improved (10, or 66.7%) was significantly greater than the number in which the control group improved (3, or 20.0%; $\chi^2 = 5.54$, d.f. = 1, $P < .05$).

TABLE 5
CHANGES IN BEHAVIOR (FROM EXAMINATION BEHAVIOR RATING FORM)

	Control[1]			Experimental[2]		
	$\bar{d}$	N	t	$\bar{d}$	N	t
Item of Behavior Ratings						
1. Separation	+.91	11	2.97[3]	+0.50	24	5.198
2. Participation	+.45	20	1.44[4]	+1.20	25	4.000
3. Activity Level	+.52	21	2.08[3]	+.650	26	2.60[3]
4. Activity Level	+.24	21	1.24[3]	+0.50	26	3.45[3]
5. Follow Instructions	+.38	21	1.70[3]	+0.92	26	3.818
6. Hyperactivity	+.71	21	2.19[3]	+0.77	26	3.16[3]
7. Hostile Aggressive Rejecting	+.35	20	1.42[3]	+0.04	26	0.20[5]
8. Passive Rejecting	+.00	21	0.00[5]	+0.46	25	1.94[3]
9. Attention Span	+.52	21	1.55[5]	+0.96	26	3.16[3]
10. Dependence on Gestures	+.71	22	2.56[3]	+0.48	25	2.21[3]
11. Satisfiability	-.26	19	0.80[5]	+0.04	26	0.12[5]
12. Satisfiability	+.39	21	0.59[5]	+0.04	26	0.20[5]
13. Speech Level	+.05	21	0.22[5]	+0.27	26	1.00[5]
14. Appropriateness of Communication	+.60	10	2.25[5]	-0.53	15	2.76[3,5]
15. Comprehension of Language	-.05	21	0.25[5]	+0.54	26	3.63[3]
16. Awareness of Failure	+.62	21	2.59[3]	+0.62	26	2.38[3]

[1]one tailed test of significance. [2]one tailed test of significance. [5]not significant.
[3]$p < .10$ [4]$p < .05$ [5]$p < .025$ [6]$p < .01$ [7]$p < .005$ [8]$p < .0005$

Table 6 contains the analysis of change in the items in the *Examination Behavior Rating Form* in terms of a sign test. As is shown in the table, again a significant number of children showed an increase (improvement) in their global behavior score (mean of ratings), regardless of group membership. With regard to the component items of the form the results indicate that a significant number of children in the experimental group improved in the same ten items for which a significant increase was shown in the previous table (5). In addition a significant number of children in the experimental group showed a decrease (worsening) in Appropriateness of Communication, as was found previously.

With regard to the control group, the number of children improving was found to be significant for only two of the fifteen items (5. Hyperactivity, and 15. Awareness of Failure). The number of Behavior items in which the experimental group showed significant improvement (10, or 66.7%) was again significantly greater than the number in which the control group improved (2, or 13.3%; $\chi^2 = 12.800$, d.f. = 1, $P < .001$).

Table 7 contains the Interrater Reliability for the items in the Examination Behavior Rating Form. As is shown in the table all correlations were significant. The correlations ranged from a low of 0.55 (5. Hyperactivity) to a high of 1.00 (1. Separation). Twelve of the 16 correlations were above 0.70 and eight were above 0.80. The correlations are based on a sample of observations made by two independent observers for 18 of the children in the sample.

43

TABLE 6

[illegible]

	Control			Experimental		
	n	$\bar{x}$	p	n	$\bar{x}$	p
Mean of Behavior Rating	16	6	.038	13	4	.025
1. Separation	8	3	.229	13	2	.004
2. Participation	9	2	.115	13	3	.040
3. Activity Level	7	4	.340	13	2	.004
4. Follow Instructions	7	2	.180	14	4	.006
5. Hyperactivity	13	5	.022	13	4	.025
6. Hyperactivity	6	1	.376	3	3	.036
7. Hostile-Rejecting-Aggressive	7	4	0.000	14	4	.015
8. Passive-Rejecting	11	4	.110	14	5	.013
9. Attention Span	12	4	.076	14	5	.032
10. Dependence on Gestures	5	7	.081	12	11	.500
11. Intelligibility	6	2	.680	6	6	.714[1]
12. Speech Level	2	3	1.000	9	7	.402
13. Appropriateness of Communication	6	0	.230	1	0	.040[2]
14. Comprehension of Language	7	7	1.000	11	3	.029
15. Awareness of Failure	14	6	.013	13	4	.001

[1]One tailed test of significance. [2]One tailed test of significance.

TABLE 7

[illegible]

Items	$\bar{x}$	p
Mean of Behavior Ratings	0.96	.01
1. Separation	1.00	.01
2. Participation	0.82	.01
3. Activity Level	0.88	.01
4. Follow Instructions	0.76	.01
5. Hyperactivity	0.55	.02
6. Hyperactivity	0.68	.01
7. Hostile-Rejecting-Aggressive	0.78	.01
8. Passive-Rejecting	0.77	.01
9. Attention Span	0.65	.01
10. Dependence on Gestures	0.63	.01
11. Intelligibility	0.89	.01
12. Speech Level	0.50	.01
13. Appropriateness of Communication	0.90	.01
14. Comprehension of Language	0.75	.01
15. Awareness of Failure	0.85	.01

Table 8a contains the results of the analysis of covariance of the global behavior rating (mean of the individual ratings). As the table indicates the children in the experimental group had a significantly higher adjusted post score (indicative of improvement) than did the children in the control group. This was true for both levels of speech development. In addition children with speech showed a significantly greater improvement than did children without speech in both the experimental and control groups.

With regard to the component items of the scale the results indicate that the experimental group showed a significantly greater improvement in items 3. Activity Level (3d), 12. Speech Level (3m), and 14. Comprehension of Language

(Sc), than did the children in the control group. The multiple range test indicates that with regard to Activity Level (7d) the differences between experimental and control group, by speech level, or the differences between the speech and no speech group, by group membership were not significant.

For the other two variables--Speech Level (5m), and Comprehension of Language (5n), which also showed significant effects by speech level, the results of the multiple range test indicated that the experimental condition was particularly effective in the speech group. The differences between the experimental and control conditions for the No Speech group was not significant. In addition the significant difference by speech level was only true for the experimental condition.

With regard to items 7. Hostile-Rejecting Aggressive (8h), 9. Attention Span (8j), and 10. Dependence on Gestures (8k), the results of the analysis of covariance indicates only a significant differential change by Speech Level. The results of the multiple range test, however, indicate that with regard to variables 7. Hostile-Rejecting Aggressive) and 9. Attention Span, these differences were limited to the control group. Within the control group, those children with speech showed a significantly greater improvement in these two variables than did children without speech. With regard to variable 10. Dependence on Gestures, the multiple range test indicates that the speech effect is limited to the experimental group where the children with speech showed a significant improvement on this variable when compared to the children without speech. In addition the multiple range test also indicates that the experimental condition was successful in significantly improving the Hostile-Rejecting Aggressive behavior on the part of the children without speech; and the Dependence on Gestures of the children with speech.

The analysis of covariance also revealed that there was a significant interaction effect in those aspects of behavior revealed by items 2. Participation (8c), 4. Willingness to Follow Instructions (8e), 8. Passive Rejecting (8i), and 15. Awareness of Failure. The interaction effect indicates that improvement is dependent upon both speech level and group membership.

The multiple range test of adjusted post means enables us to clarify the meaning of the interaction. With regard to item 2. Participation, 4. Willingness to Follow Instructions, and 15. Awareness of Failure. Children in the control group who had speech showed a significantly greater improvement than did their counterparts without speech, with no comparable differences among the experimental group. In addition the experimental condition was successful in significantly improving the behavior of children without speech, on these variables. There was no corresponding differences in the speech group.

For item 8. Passive-Rejecting Behavior, the multiple range test indicates that in the experimental condition children with speech showed a significant improvement in that aspect of behavior measured by this item, with no comparable differences occurring among the children in the control group. The results also indicate that participation in the experimental group resulted in significant improvement only on the part of the children with speech.

The remaining five items of behavior as measured in the Examination Behavior Rating Form (Tables 8h, 8f, 8g, 8l, and 8n) showed no significant findings indicative of differential change between the four sub groups.

TABLE 6a

ANALYSIS OF COVARIANCE OF BEHAVIOR RATINGS (I. DISRUPTION) BY SPEECH LEVEL AND GROUP[1]

	Control[2]		Experimental[2]	
	$\bar{Y}$	N	$\bar{Y}$	N
Speech	3.64	9	4.12	12
No Speech	2.66	10	3.10	13

ANALYSIS OF ANALYSIS OF COVARIANCE

Source	Sums of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.6464	1	0.6464	26.56	$< .005$[3]
Group	0.331	1	0.331	0.04	$< .005$[3]
Interaction	0.0050	1	0.0050	0.00	N.S.
Error	1.0000	42	0.0025		

SUMMARY OF MULTIPLE RANGE TEST

Speech	3.64	4.12	$< .025$[3]
No Speech	2.66	3.10	$< .050$[3]
P	$< .05$[4]	$< .05$[4]	

[1]method for unequal subclasses used. [2]post means were adjusted to take into account baseline differences. [3]one tailed test of significance. [4]two tailed test of significance.

TABLE 6b

ANALYSIS OF COVARIANCE OF BEHAVIOR RATINGS (I. DISRUPTION) BY SPEECH LEVEL AND GROUP[1]

	Control[2]		Experimental[2]	
	$\bar{Y}$	N	$\bar{Y}$	N
Speech	3.89	9	4.08	12
No Speech	4.70	11	4.57	13

ANALYSIS OF ANALYSIS OF COVARIANCE

Source	Sums of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.1568	1	0.1568	0.92	N.S.
Group	0.111	1	0.111	0.95	N.S.
Interaction	0.123	1	0.123	0.105	N.S.
Error	4.701	40	0.117		

[1]method for unequal subclasses used. [2]post means were adjusted to take into account baseline differences.

TABLE 6c

ANALYSIS OF COVARIANCE OF BEHAVIOR RATINGS (2. PARTICIPATION) BY SPEECH LEVEL AND GROUP[1]

	Control[2]		Experimental[2]	
	$\bar{Y}$	N	$\bar{Y}$	N
Speech	3.65	9	3.02	12
No Speech	2.49	12	3.40	14

ANALYSIS OF ANALYSIS OF COVARIANCE

Source	Sums of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.143	1	0.143	1.56	N.S.
Group	0.0514	1	0.0514	0.56	N.S.
Interaction	0.562	1	0.562	6.24	$< .025$[4]
Error	3.795	42	0.090		

SUMMARY OF MULTIPLE RANGE TEST

Speech	3.65	3.01	N.S.
No Speech	2.49	3.40	$< .025$[3]
P	$< .05$[4]	N.S.	

[1]method for unequal subclasses used. [2]post means were adjusted to take into account baseline differences. [3]one tailed test of significance. [4]two tailed test of significance.

[illegible]

	Control[1]		Experimental[1]	
	$\bar{X}$	%	$\bar{X}$	%
Speech	0.14	9	0.06	12
No Speech	2.83	12	3.28	14

Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.075	1	0.075	1.29	N.S.
Group	0.192	1	0.192	3.33	.05[2]
Interaction	0.002	1	0.002	0.03	N.S.
Error	3.592	62	0.06		

Speech	0.14	0.06	N.S.
No Speech	2.83	3.28	N.S.
F	N.S.	N.S.	

[illegible] [1]Modified Arc sine[illegible] used. [2]Post means were adjusted to take into account baseline differences. [3]One tailed test of significance used.

[illegible]

	Control[1]		Experimental[1]	
	$\bar{X}$	%	$\bar{X}$	%
Speech	0.04	9	0.05	12
No Speech	0.30	02	0.64	06

Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.108	1	0.108	0.62	N.S.
Group	0.231	1	0.231	2.72	N.S.
Interaction	0.831	1	0.831	10.01	<.005[3]
Error	0.071	62	0.083		

Speech	0.04	0.05	N.S.
No Speech	0.30	0.64	<.05[3]
F	<.05[2]	N.S.	

[illegible] [1]Modified Arc sine[illegible] used. [2]Post means were adjusted to take into account baseline differences. [3]One tailed test of significance. [4]One tailed test of significance.

TABLE 4a

ANALYSIS OF VARIANCE OF [illegible] BY SPEECH LEVEL AND GROUP[1]

	Control[2]		Experimental[2]	
	$\bar{Y}$	N	$\bar{Y}$	N
Speech	6.44	9	6.00	12
No Speech	5.88	13	6.24	14

[illegible]

Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.000	1	0.000	0.00	N.S.
Group	0.000	1	0.000	0.00	N.S.
Interaction	0.270	1	0.270	2.38	N.S.
Error	6.870	60	0.115		

[1]Method for unequal subclasses used. [2]Cell means were adjusted to take into account baseline differences.

TABLE 4b

ANALYSIS OF VARIANCE OF [illegible] BY SPEECH LEVEL AND GROUP[1]

	Control[2]		Experimental[2]	
	$\bar{Y}$	N	$\bar{Y}$	N
Speech	0.56	9	0.83	12
No Speech	0.97	13	0.60	14

[illegible]

Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.060	1	0.060	0.36	N.S.
Group	0.036	1	0.036	0.23	N.S.
Interaction	0.074	1	0.074	0.33	N.S.
Error	9.870	60	0.029		

[1]Method for unequal subclasses used. [2]Cell means were adjusted to take into account baseline differences.

TABLE 4c

ANALYSIS OF VARIANCE OF [illegible] BY SPEECH LEVEL AND GROUP[1]

	Control[2]		Experimental[2]	
	$\bar{Y}$	N	$\bar{Y}$	N
Speech	0.78	9	0.60	12
No Speech	0.75	13	0.66	14

[illegible]

Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.000	1	0.000	0.00	.000[3]
Group	0.001	1	0.001	1.00	N.S.
Interaction	0.150	1	0.150	0.65	N.S.
Error	0.734	60	0.734		

[illegible]

Speech	0.78	0.69	N.S.
No Speech	0.75	0.66	<.05[3]
P	<.05[3]	N.S.	

[1]Method for unequal subclasses used. [2]Cell means were adjusted to take into account baseline differences. [3]Two tailed test of significance. [4]One tailed test of significance.

TABLE 6

ANALYSIS OF COVARIANCE OF RECOGNITION RATIOS (R. ATTENTION (R.A)) BY SPEECH LEVEL AND GROUP[1]

		Control[2]		Experimental[2]	
		$\bar{Y}$	N	$\bar{Y}$	N
Speech		3.78	9	4.75	12
No Speech		2.63	12	3.19	14
ANALYSIS OF ANALYSIS OF COVARIANCE					
Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.0005	1	0.0005	0.01	N.S.
Group	0.0213	1	0.0213	0.36	N.S.
Interaction	0.5709	1	0.5709	9.62	$< .01^3$
Error	3.3791	62	0.0594		
ANALYSIS OF MULTIPLE RANGE TEST					
Speech	3.78		4.75	$< .025^4$	
No Speech	3.63		3.19	N.S.	
P	N.S.		$< .05^3$		

[1]Method for unequal subclasses used. [2]Joint means were adjusted to take into account baseline differences. [3]one tailed test of significance. [4]two tailed test of significance.

TABLE 6

ANALYSIS OF COVARIANCE OF RECOGNITION RATIOS (R. ATTENTION (R.A)) BY SPEECH LEVEL AND GROUP[1]

		Control[2]		Experimental[2]	
		$\bar{Y}$	N	$\bar{Y}$	N
Speech		3.83	9	3.65	12
No Speech		2.78	12	3.23	14
ANALYSIS OF ANALYSIS OF COVARIANCE					
Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.3063	1	0.3063	6.90	$< .025^4$
Group	0.0019	1	0.0019	0.04	N.S.
Interaction	0.1116	1	0.1116	1.80	N.S.
Error	3.2333	61	0.0531		
ANALYSIS OF MULTIPLE RANGE TEST					
Speech	3.83		3.65	N.S.	
No Speech	2.78		3.23	N.S.	
P	$< .05^3$		N.S.		

[1]Method for unequal subclasses used. [2]Joint means were adjusted to take into account baseline differences. [3]one tailed test of significance. [4]two tailed test of significance.

[illegible]

	Control[1]		Experimental[1]	
	$\bar{Y}$	N_j	$\bar{Y}$	N_j
Speech	5.50	9	6.27	13
No Speech	2.83	12	2.92	16

[illegible]

Source	Sum of Squares	d.f.	Mean Square	F Ratio	p
Speech Level	0.850	1	0.850	0.12	n.s.
Group	5.333	1	5.333	0.80	n.s.
Interaction	2.133	1	2.133	1.60	n.s.
Error	0.458	60	0.111		

[illegible]

Speech	0.50	6.27	$< .05^{2}$
No Speech	2.88	2.92	n.s.
F	n.s.	$< .05^{2}$	

[1]method for unequal subclasses used. [2]cell means were adjusted to take into account baseline differences. [3]was called out of significance. [4]was called out of significance.

[illegible]

	Control[1]		Experimental[1]	
	$\bar{Y}$	N_j	$\bar{Y}$	N_j
Speech	0.05	9	1.85	13
No Speech	0.27	12	2.27	16

[illegible]

Source	Sum of Squares	d.f.	Mean Square	F Ratio	p
Speech Level	0.850	1	0.850	5.07	n.s.
Group	8.802	1	8.802	1.85	n.s.
Interaction	0.868	1	0.868	0.40	n.s.
Error	2.873	60	0.048		

[1]method for unequal subclasses used. [2]cell means were adjusted to take into account baseline differences.

TABLE 6a

ANALYSIS OF COVARIANCE OF MEAN AFFIXIN SATISFACTION SCORES ON SPEECH LEVELS BY SPEECH LEVEL AND LOUDER[1]

	Controls[2]		Experimentals[2]	
	$\bar{X}$	N	$\bar{X}$	N
Speech	3.15	9	3.33	12
No Speech	1.62	12	1.08	18

ANALYSIS OF ANALYSIS OF COVARIANCE

Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	6.648	1	6.648	9.89	$< .01^{3}$
Group	6.100	1	6.100	9.19	$< .01^{3}$
Interaction	4.332	1	4.332	3.84	N.S.
Error	4.605	68	0.109		

ANALYSIS OF MULTIPLE RANGE TEST

Speech	0.15	0.39	$< .025^{3}$
No Speech	1.62	1.08	N.S.
P	N.S.	$< .05^{3}$	

[1]method for unequal subclasses used, [2]post scores were adjusted to take into account baseline differences, [3]was tested out of significance, [4]was tested out of significance.

TABLE 6a

ANALYSIS OF COVARIANCE OF MEAN AFFIXIN SATISFACTION SCORES ON SPEECH LEVELS BY SPEECH LEVEL AND LOUDER[1]

	Controls[2]		Experimentals[2]	
	$\bar{X}$	N	$\bar{X}$	N
Speech	3.09	9	3.33	12
No Speech	3.27	9	3.67	9

ANALYSIS OF ANALYSIS OF COVARIANCE

Source	Sum of Squares	d.f.	Mean Square	F Ratio	P
Speech Level	0.156	1	0.164	1.29	N.S.
Group	0.385	1	0.389	3.06	N.S.
Interaction	0.016	1	0.016	0.13	N.S.
Error	3.042	20	0.127		

[1]method for unequal subclasses used, [2]post scores were adjusted to take into account baseline differences.